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BALLISTIC MISSILES

1. We estimate that the USSR could now have available for operational use, surface-to-surface ballistic missiles with ranges of 100, 200, 350, 700, and 1,000 nautical miles. The first four of these are probably now operational. The 1,000 mile missile is estimated as a Soviet capability for operational use sometime in 1958 if, as seems likely, this missile is a modification of the 700 mile missile, with lighter warhead. There have been about a dozen Soviet test firings to approximately 1,000 miles thus far. The 1,000 nautical mile missile deployed inside the USSR and/or the 700 nautical mile missile deployed in the Satellites would provide the USSR with nuclear weapons delivery systems capable of reaching the majority of our overseas bases. We have, however, no firm evidence of the operational deployment of any of these missiles.

2. In 1951, a large rocket engine of about 220,000 pounds thrust was being fabricated. This engine could have been static tested in 1952 and ready for incorporation into a missile system and flight testing in 1953. The thrust rating of this engine could have been increased by now and the coupling of two or more such engines is

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within Soviet capabilities, although we have no evidence that either advancement has been accomplished. We believe that two of these engines coupled together provide the first stage booster for Soviet ICBMs and earth satellites.

3. The existence of a new 3,500 nautical mile ballistic missile test range has been firmly established. We believe that six ICBM vehicles have been successfully flight-tested on this range and that all three Soviet earth satellites were launched from here. We have good evidence that at least the last four ICBM firings reached the general impact area.

4. We believe the USSR is concentrating on the development of an ICBM which, when operational, will probably be capable of carrying a high-yield nuclear warhead to a maximum range of about 5,500 nautical miles, with a CEP of five nautical miles or less at maximum range, and a system reliability of about 50 percent.

Recent calculations of Soviet ICBM warhead weight carrying capabilities, [REDACTED] 25X1X1

[REDACTED] indicate that the warhead weight capability, which is currently estimated at 2,000 pounds, may be as great as 5,000 pounds. This would mean a multi-megaton yield warhead. This

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question is currently under priority consideration in the intelligence community.

5. We estimate that some time during the year 1959, the USSR will probably have a first operational capability with up to 10 prototype ICBMs, with characteristics approximating those estimated above. We cannot, however, disregard the possibility that the Soviets may establish in the latter part of 1958 a limited ICBM capability with missiles of unproven accuracy and reliability. I should like to emphasize, however, that we have no firm evidence of the construction of bases for launching ICBMs or of their deployment.

6. ICBMs could probably be produced, launching facilities completed, and operational units trained at a rate sufficient to give the USSR an operational capability with 100 ICBMs about one year (1960) after its first operational capability date, and with 500 ICBMs about two or at most three years (1961-62) after first operational capability date.

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